REMARKS

The Applicants are filing this Amendment and Response in response to an Office

Action dated October 18, 2007. At the time of the Official Action, claims 1-21 were pending.

In this Response and Amendment, no claims are canceled or added. Accordingly, claims 1-21

remain currently pending. Claims 1, 8 and 15 are amended.

In the Office Action, claims 1-21 were rejected under 35 U.S.C. §102(b) as being

anticipated by U.S. Patent No. 6,070,189 to Bender et al. (hereinafter referred to as "the

Bender reference"). This rejection is addressed in detail below.

The Rejection Under 35 U.S.C. §102(e)

With respect to the rejection of claims 1-21 under Section 102, the Examiner's

rejection of independent claims 1, 8 and 15 is exemplary:

> As per Claim 1, Bender teaches the invention as
> claimed including a notification
> mechanism (abstract, lines 1-3) comprising:
> a. a plurality of completion queue handlers associated
> with a communication device, each of the plurality of
> completion queue handlers associated with a process (column
> 4, lines 4-6); and
> b. at least one completion queue associated with each
> one of the plurality of completion queue handlers (column 5,
> lines 13-1 8).

Office Action, p. 2

> As per Claim 8, Bender teaches the invention as
> claimed including a network (column 3, line 2) comprising:
> a. a plurality of systems (abstract, lines 1-3);
> b. a switch network that connects the plurality of
> systems for communication (column 3, lines 11 -1 5); and

     c. at least one of the plurality of systems, wherein the at least one of the plurality of systems (abstract, lines 1-3) comprises:

     d. a communication device having a plurality of completion queues (column 4, lines 60-62); and

     e, at least two completion handlers associated with the communication device, wherein each completion handler is associated with one of a plurality of processes and associated with at least one of the plurality of completion queues (column 15, lines 48-62).

Office Action, p. 4

     As per Claim 15, Bender teaches the invention as claimed including a method for providing notification to a plurality of processes (abstract, lines 1-3) comprising:

     a. creating a plurality of completion queues on a communication device, each of the plurality of completion queues associated with at least one of a plurality of completion queue handlers that are associated with the communication device, wherein each of the plurality of completion queue handlers are associated with one of a plurality of processes (column 4, lines 60-62 & column 15, lines 48-62);

     b. placing a completion queue entry on one of the plurality of completion queues (column 5, lines 13-1 8);

     c. invoking one of a plurality of completion queue handlers associated with the one of the plurality of completion queues (column 4, lines 60-62); and

     d. notifying the one of a plurality of processes associated with the one of a plurality of completion queue handlers (column 15, lines 48-50).

Office Action, pp. 5-6

Legal Precedent

The Applicant respectfully traverses the rejection. Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically

shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

In order to maintain a proper rejection under section 102, a single reference must teach each

and every element or step of the rejected claim, else the reference falls under section 103.

Atlas Powder v. E.I. du Pont, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicants

need only point to a single element not found in the cited reference to demonstrate that the

cited reference fails to anticipate the claimed subject matter. The prior art reference also must

show the *identical* invention *"in as complete detail as contained in the ... claim"* to support a

prima facie case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9

U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

In the present case, the rejection of independent claims 1, 8 and 15 under Section 102

as being anticipated by the Bender reference is improper because the Bender reference does

not teach each and every element recited by the claims. For example, independent claims 1

and 15 respectively recite a notification mechanism and a method for providing notification to

a plurality of processes comprising a plurality of completion queue handlers "wherein the

plurality of completion queue handlers are *segregated to target processors*; and wherein the

segregation of the plurality of completion queue handlers is adapted to *reduce cache line*

invalidation, cache line eviction, and/or unnecessary memory bus overhead associated with

synchronization of accesses to the memory." (Emphasis added.) Independent claim 8 recites

similar subject matter applied to a network having a plurality of systems and switches. Hence,

the benefit provided by segregating the plurality of queue handlers to target processors is an

overall improvement of cache efficiency and memory bus utilization, as disclosed in the

specification. *See*, Application, paragraph 29.

In contrast, the Bender reference discloses that:

> The header handler then indicates to LAPI which one of
> receiver or target user buffers 410A to 410W the user message
> data is to be stored in, and further indicates which of the
> completion routines 412A to 412M is to complete the transfer
> of the user message. LAPI then transfers the user message data
> from the target network buffer 408 to the indicated target user
> buffer 410. When the last user message packet is received,
> LAPI queues the indicated completion routine 412 in one of
> one or more completion handler queues which, when
> executed, completes the transfer. The target user buffer may
> be a null buffer when the message is a command or other
> message that does not require a target buffer. Similarly, the
> completion routine may be a null routine when the transfer is
> completed by the header handler.

Bender, col. 3, line 63- col. 4, line 10; *see also* FIG. 3.

At best, the Bender reference discloses the general operation of completion queues and

completion queue handlers with user buffers (nodes) in processes involving the storage and/or

retrieval of data. In fact, FIG. 3 of the Bender reference, as cited by the Examiner, merely

shows the trivial participation of completion queues and the completion queues handlers

when messages are sent between processors.

However, the disclosure provided by the Bender reference fails to show, illustrate or

suggest how each one of a plurality of completion queue handlers interacts with one or more

processors, specifically to the extent indicating a non-trivial segregation of the queue handlers

to target processors, as provided by the claimed invention. By not disclosing such

segregation of completion queue handlers, the Bender reference cannot disclose a process

facilitating a reduction of cache line invalidation, cache line eviction, and/or unnecessary

memory bus overhead associated with synchronization of accesses, as recited by independent claims 1, 8 and 15.
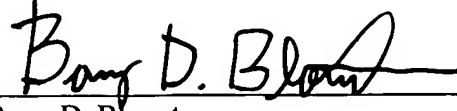
For at least these reasons, the Applicants respectfully submit that independent claims 1, 8 and 15 (and the claims dependent thereon) are not anticipated by the Bender reference. Accordingly, the Applicants respectfully request the withdrawal of the rejection of claims 1, 8 and 15 under Section 102 based on the Bender reference.

Conclusion

In view of the remarks set forth above, the Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of all pending claims 1-21. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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